

# Amneet Pal Singh Bhalla

## List of Publications by Year in descending order

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29  
papers

849  
citations

430874

18  
h-index

477307

29  
g-index

29  
all docs

29  
docs citations

29  
times ranked

734  
citing authors

#	ARTICLE	IF	CITATIONS
1	Handling Neumann and Robin boundary conditions in a fictitious domain volume penalization framework. <i>Journal of Computational Physics</i> , 2022, 448, 110726.	3.8	4
2	A coupled distributed Lagrange multiplier (DLM) and discrete element method (DEM) approach to simulate particulate flow with collisions. <i>Powder Technology</i> , 2022, 398, 117091.	4.2	2
3	A subcycling/non-subcycling time advancement scheme-based DLM immersed boundary method framework for solving single and multiphase fluid-structure interaction problems on dynamically adaptive grids. <i>Computers and Fluids</i> , 2022, 238, 105358.	2.5	6
4	Critique on "Volume penalization for inhomogeneous Neumann boundary conditions modeling scalar flux in complicated geometry". <i>Journal of Computational Physics</i> , 2021, 433, 110163.	3.8	7
5	The inertial sea wave energy converter (ISWEC) technology: Device-physics, multiphase modeling and simulations. <i>Ocean Engineering</i> , 2021, 229, 108879.	4.3	21
6	A one-sided direct forcing immersed boundary method using moving least squares. <i>Journal of Computational Physics</i> , 2021, 440, 110359.	3.8	2
7	An immersed interface method for discrete surfaces. <i>Journal of Computational Physics</i> , 2020, 400, 108854.	3.8	30
8	Simulating water-entry/exit problems using Eulerian-Lagrangian and fully-Eulerian fictitious domain methods within the open-source IBAMR library. <i>Applied Ocean Research</i> , 2020, 94, 101932.	4.1	33
9	Comparison of wave-structure interaction dynamics of a submerged cylindrical point absorber with three degrees of freedom using potential flow and computational fluid dynamics models. <i>Physics of Fluids</i> , 2020, 32, .	4.0	30
10	An adaptive and energy-maximizing control optimization of wave energy converters using an extremum-seeking approach. <i>Physics of Fluids</i> , 2020, 32, .	4.0	19
11	A DLM immersed boundary method based wave-structure interaction solver for high density ratio multiphase flows. <i>Journal of Computational Physics</i> , 2019, 398, 108804.	3.8	37
12	Brownian dynamics of fully confined suspensions of rigid particles without Green's functions. <i>Journal of Chemical Physics</i> , 2019, 150, 164116.	3.0	8
13	A robust incompressible Navier-Stokes solver for high density ratio multiphase flows. <i>Journal of Computational Physics</i> , 2019, 390, 548-594.	3.8	60
14	Transition in swimming direction in a model self-propelled inertial swimmer. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	23
15	A new constraint-based formulation for hydrodynamically resolved computational neuromechanics of swimming animals. <i>Journal of Computational Physics</i> , 2018, 375, 684-716.	3.8	13
16	Hydrodynamic optimality of balistiform and gymnotiform locomotion. <i>European Journal of Computational Mechanics</i> , 2017, 26, 31-43.	0.6	13
17	A moving control volume approach to computing hydrodynamic forces and torques on immersed bodies. <i>Journal of Computational Physics</i> , 2017, 347, 437-462.	3.8	23
18	An immersed boundary method for rigid bodies. <i>Communications in Applied Mathematics and Computational Science</i> , 2016, 11, 79-141.	1.8	70

#	ARTICLE	IF	CITATIONS
19	Convergent Evolution of Mechanically Optimal Locomotion in Aquatic Invertebrates and Vertebrates. PLoS Biology, 2015, 13, e1002123.	5.6	41
20	A fully resolved active musculo-mechanical model for esophageal transport. Journal of Computational Physics, 2015, 298, 446-465.	3.8	31
21	Undulating fins produce off-axis thrust and flow structures. Journal of Experimental Biology, 2014, 217, 201-13.	1.7	43
22	Fully resolved immersed electrohydrodynamics for particle motion, electrolocation, and self-propulsion. Journal of Computational Physics, 2014, 256, 88-108.	3.8	25
23	Energy efficiency and allometry of movement of swimming and flying animals. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7517-7521.	7.1	80
24	Separability of drag and thrust in undulatory animals and machines. Scientific Reports, 2014, 4, 7329.	3.3	27
25	Gray's paradox: A fluid mechanical perspective. Scientific Reports, 2014, 4, 5904.	3.3	19
26	A unified mathematical framework and an adaptive numerical method for fluid-structure interaction with rigid, deforming, and elastic bodies. Journal of Computational Physics, 2013, 250, 446-476.	3.8	119
27	A Forced Damped Oscillation Framework for Undulatory Swimming Provides New Insights into How Propulsion Arises in Active and Passive Swimming. PLoS Computational Biology, 2013, 9, e1003097.	3.2	47
28	A minimally-resolved immersed boundary model for reaction-diffusion problems. Journal of Chemical Physics, 2013, 139, 214112.	3.0	10
29	Controlling microchannel gas flow rates through time-modulated pressure pulsation. Journal of Applied Physics, 2007, 102, 114910.	2.5	6